innovate RI 2007

Innovation and Economic Prosperity in Rhode Island

RHODE ISLAND
SCIENCE & TECHNOLOGY
ADVISORY COUNCIL

2007 RECOMMENDATIONS

Building an Innovation Economy in Rhode Island: 2007 Recommendations of the Rhode Island Science and Technology Advisory Council

The Rhode Island Science and Technology Advisory Council (STAC) was created in 2005 and sustained by legislative statute in 2006 with the mission to make innovation central to the state's leadership agenda. STAC is charged with recommending and implementing policies and practices that 1) support Rhode Island's research and development activity; 2) promote collaboration across institutions; 3) encourage entrepreneurship and new company creation; and 4) enable all organizations, public and private, to innovate.

In this capacity, STAC aims to assist Rhode Island's leadership in creating an innovation economy that will grow higher wage jobs and address critical needs in areas such as healthcare, education and public safety.

The following report includes an update on current activities, outcomes of STAC's 2006 recommendations, and STAC's recommendations for 2007.

What is an "innovation economy" and why do we need one?

Today's economy looks and performs much differently than the economy that defined the 19th and 20th centuries. In Rhode Island and across the United States, a declining industrial economic base is being replaced by sectors that thrive on the utilization of technology, information, and new modes of global connectivity. Creating a 21st century innovation economy requires different ways of thinking, access to new infrastructure, and new skills for workers.

The effect of these changes and the emergence of a truly global economy can be felt everywhere. In the past, almost all jobs that were automated or outsourced to foreign labor markets were low-skill jobs. That is no longer true. Today, work can be created, saved and instantly transmitted over the Internet and completed by work teams that may be thousands of miles apart. This new mode of production enables employers to look globally for the most skilled, competent and competitively priced labor. This is true for work at virtually all skill and wage levels.

The United States is not alone in the race to grow a highly skilled workforce. In the last 30 years, countries around the globe have made vast improvements in their education systems, producing more (and better qualified) college graduates, and increasing investment in areas such as science, math and engineering. As a result, creative and competent workers can be found in many countries, not only the United States.

Furthermore, the division between low- and high-skilled jobs has blurred. Even the most traditional forms of manual labor have seen the integration of technology, the introduction of increasingly sophisticated tools, and a rising dependency on computers and automated systems that require well-trained human operators.

One of the most significant changes in our economy, and the place where the power of innovation is most evident, is the accelerated pace of business and company lifecycles that has occurred over the last decade. Changes in how a business produces, delivers and defines its services and products must be made quickly and more frequently than ever before. In today's global marketplace, bringing great ideas to life requires radical new modes of collaboration and sharing across industries and sectors, as well as dramatically accelerated "idea to market" timelines.

Fluctuations in the global economy often challenge and reward organizations in ways they did not anticipate, inspiring rapid organizational evolution that 30 years ago would have seemed impossible. Organizations that succeed under these conditions know how to seize emerging opportunities, tap into and grow new markets, attract and retain workers with flexible and sophisticated skill sets, and respond quickly to changes in the environment.

What is true for the private sector is true for the public sector. We have an unprecedented opportunity to harness the power of the global economy to create new solutions to the world's most serious and challenging problems. Never has innovation been so necessary. Although we face many hurdles in raising the standard of living for all citizens, never have humans had so many resources, technological and otherwise, to tackle these tough problems.

A mobile, global workforce. Explosive technological growth. Demand for educated workers with flexible skill sets. Nimble organizations that rapidly adapt. The decentralization of corporate activity. Creating new solutions to human problems. These define an innovation economy. And it is this kind of innovation economy that Rhode Island must aggressively build to create prosperity for its citizens.

STAC's vision for an innovation economy in Rhode Island spans both the public and private sectors, enabling each to create new products, services and solutions, and to deliver the benefits of these solutions to all citizens. An innovation economy will do more than grow higher wage jobs in industries well positioned to succeed in the 21st century. An innovation economy will help our communities better address critical needs in areas such as healthcare, education and public safety.

If it were easy to grow and support this kind of economy, more places would be doing it. And more people would be reaping the benefits. Enabling innovation is difficult. Truly transformative innovation—the kind that radically changes how we live and work—requires collaboration across traditional public and private sector boundaries that most people and organizations struggle to implement. Failure to succeed in this endeavor is not an option. Success in enabling innovation is essential to creating a better standard of living for all.

STAC's vision for an innovation economy in Rhode Island spans both the public and private sectors, enabling each to create new solutions and deliver the benefits of these solutions to all citizens.

Building an Innovation Economy

In 2006, STAC released results of a state-wide assessment that evaluated Rhode Island's ability to grow an innovation economy. The *innovateRI* assessment tracked Rhode Island's performance against regional and national innovation indicators, captured a snapshot of Rhode Island's current innovation landscape, and benchmarked the state's performance in areas such as talent recruitment, research activity, and new company creation.

The assessment revealed that we must do more to build an innovation economy that produces better, higher wage jobs. For example, productivity, a measure of innovation that weighs labor and financial investment against the return gained on that investment, is lower for Rhode Island than for its regional and national peers. At $40,425, the state's gross state product per capita lags behind both the New England and national averages ($48,237 and $40,778, respectively). (see figure 1)

Rhode Island also trails the rest of New England in the percentage of workers employed in business, information technology, engineering, mathematics,

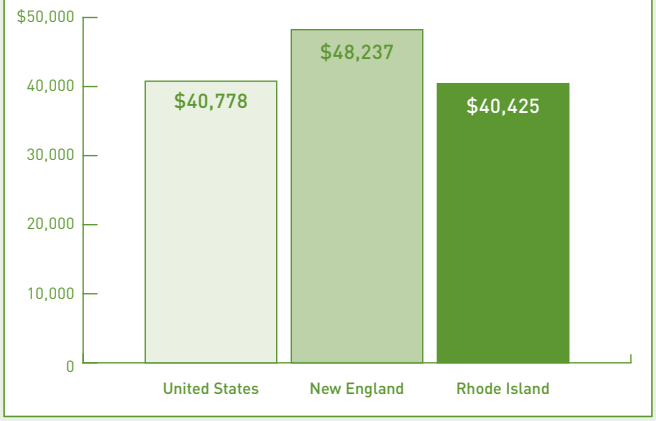
and the life and physical sciences, industries typically regarded as important drivers of a knowledge-based innovation economy.

Similarly, the state's educational performance shows room for improvement. Fewer Rhode Islanders graduate from college and attain graduate degrees than is average for the Northeast and we are only slightly higher than the national average (see figure 2).

The *innovateRI* assessment also found that, despite the outstanding efforts of groups such as the Slater Technology Fund, Rhode Island's programs for entrepreneurship are not stimulating the level of new company creation needed to grow a competitive innovation economy. For example, Rhode Island trails Connecticut, Massachusetts, New Hampshire, Vermont and the nation as a whole, with respect to the job share of companies growing at an annual rate of 20 percent or more. Nationally, the average amount of venture capital invested per $1,000 of gross state product is $4.06. In New England the average investment is $9.84, while Rhode Island lags considerably behind at $1.86 (see figure 3).

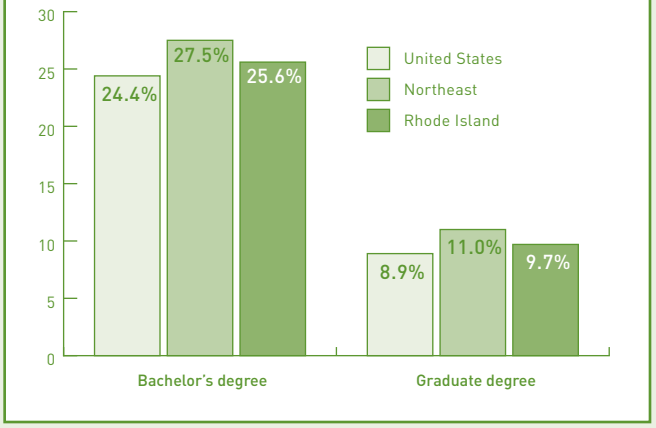
Yet, when it comes to the basic building blocks for creating an innovation economy, Rhode Island has much to be thankful for. Rhode Island enjoys the highest concentration of higher education institutions in the United States and sits at the center of a 50 mile radius that contains 86 colleges and universities. This, coupled with the outstanding work of its home institutions, creates a strong base to support research-driven activities in fields widely recognized as drivers of innovation and economic growth.

Figure 1: Gross state product per capita, 2004



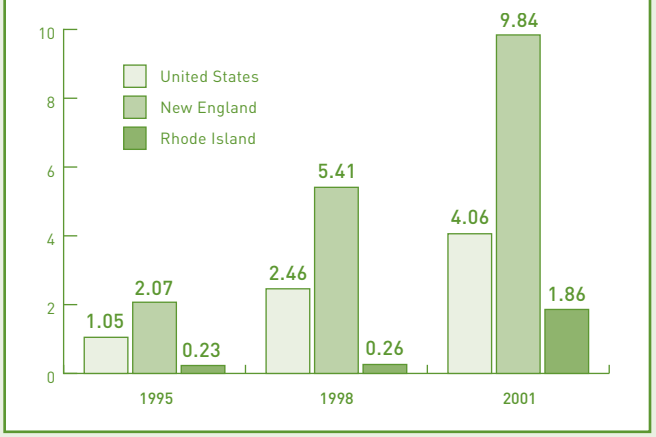
Source: Council on Competitiveness. Rhode Island Innovation Assessment data. Based on data from the U.S. Bureau of Economic Analysis and the U.S. Census Bureau.

Figure 2: Educational attainment, 2000



Source: Council on Competitiveness. Rhode Island Innovation Assessment data. Based on data from the U.S. Census Bureau.

Figure 3: Venture capital invested per $1,000 GSP



Source: Based on data from the National Science Foundation.

Innovation@Scale:
Rhode Island's Competitive Advantage in Building an Innovation Economy

Rhode Island has another important asset in building an innovation economy: our state is well positioned to serve as an innovation laboratory for exploring and testing new ways of delivering value.

Why do organizations need a place like Rhode Island? Innovation demands experimentation and change. It requires a small and manageable place where it is easier to get ideas tested before larger scale national and global rollouts. It's Business 101: leaders looking to innovate must seek out ways to experiment with new models without disrupting current operations.

Rhode Island's compact geography and unique ecosystem offer innovators the optimal conditions to test new ideas in a more manageable environment. Rhode Island, with a population of one million people in a 1,000 square mile footprint, offers innovators access to all the demographic and economic diversity of larger markets.

This capacity for **Innovation@Scale** enables organizations to leverage Rhode Island's environment to prototype innovative approaches, better understand implementation realities, and ultimately, speed the larger scale rollout of new solutions. The Innovation@Scale platform is an important and unique competitive advantage that, when fully realized, makes Rhode Island a strategic location of choice for innovative organizations across the globe.

STAC's recommendations, both past and present, recognize the importance of using Rhode Island's size as a competitive advantage. STAC remains focused on activities that leverage the state's unique strengths and existing assets.

Does Rhode Island have what it takes to build an innovation economy? Without a doubt! But to succeed, we must continue to make both short- and long-term investments that reap economic rewards for all citizens.

From Idea to Action:
Success in 2006

In 2006, STAC released its initial set of recommendations for actions to support and grow an innovation economy in Rhode Island. Championed by Governor Donald L. Carcieri, House Majority Leader Gordon Fox and Senator William Walaska, the STAC recommendations were well received and bolstered by the strong support of Senate President Joseph Montalbano, Senate Majority Leader Theresa Paiva-Weed, Senate Finance Committee Chair Stephen Alves, House Speaker William Murphy, House Finance Committee Chair Steven Costantino, and key leaders in business, science, technology and education.

STAC's success in 2006—and our ability to quickly move from idea to action—reaffirms that with bi-partisan support, Rhode Island can accelerate its transition to an innovation economy that meets the needs of all citizens. Included below is a review and status report on the outcomes of STAC's 2006 recommendations.

The Rhode Island Research Alliance and Support for Collaborative Research

STAC is committed to creating stronger connections across the state's research organizations. With support from Governor Carcieri and the Rhode Island General Assembly, STAC set out in 2006 to create a platform for promoting collaboration, maximizing state and federal investment in research, and enhancing the state's R&D-related economic development opportunities. This plan included the creation of the Rhode Island Research Alliance and the launch of a new funding program to stimulate collaborative research projects across the state's research institutions.

In total, the effort resulted in the infusion of $1.5 million in support for collaborative research. This program represents one of the most significant direct investments in research in state history and affirms the commitment of our state's leadership to strengthen Rhode Island's R&D capacity.

Investing in collaborative research is strategic for Rhode Island in two ways. First, investment in collaborative research takes advantage of Rhode Island's unique ecosystem, one in which the state's compact geography and "tight knit" social networks enable collaborators to

more easily share resources, equipment and information. Second, collaborative research is widely regarded as key to the multidisciplinary exploration most supported by federal funding agencies and many commercial and foundation funding programs. Collaborative, multi-disciplinary research also is considered to be a successful route to novel intellectual capital and new company creation.

Through the Research Alliance, STAC created a competitive, merit-based award program to support projects that are 1) of significant scientific merit; 2) collaborative across institutional boundaries; 3) catalytic in nature; and 4) well positioned to receive additional public and/or private funding. Projects with significant technology development and/or commercialization potential were also encouraged.

Rhode Island's research community showed great enthusiasm for the program. STAC received 45 proposals from researchers at eight Rhode Island higher education institutions, six hospitals and 17 private companies. Proposals, which had to include activity happening across at least two institutions to qualify, included projects in biomedical engineering, engineering, chemistry, medicine, biology, oceanography and environmental science.

Through a competitive peer review process similar to that used by the National Science Foundation, seven proposals were approved for funding. Funded proposals represented a spectrum of disciplines in the basic and applied sciences, ranging from the application of virtual reality for improving the design of prosthetic limbs to the use of algae to create biofuels.

Winning teams include scientists from Afferent Corporation, Applied Science Associates, Inc., Bay Computer Associates, Brown University, Hasbro Children's Hospital, Ion Signature Technology, Providence VA Medical Center, Rhode Island College, Rhode Island Hospital, Rhode Island School of Design, Rhode Island State Crime Lab, Salve Regina University, SubChem Systems, WET Labs, Inc., and the University of Rhode Island (see sidebar).

In addition to launching the Collaborative Research Award program, STAC, in collaboration with Rhode Island's Experimental Program to Stimulate Competitive Research (EPSCoR), kicked off efforts to create an

R.I. Steps Up R&D Investment with Competitive Research Awards

STAC recently announced the first recipients of its Rhode Island Research Alliance Collaborative Research Award program. The program is part of a $1.5 million effort to support collaborative research across the state's research institutions.

Award recipients include academic and industrial scientists pursuing projects in medicine, engineering, chemistry, biology, oceanography and environmental science. Priority was given to projects that are collaborative across institutions and well positioned to receive follow-on funding, as well as those with significant technology development and commercialization potential.

Awardees include:

- A project to use virtual reality to improve the design of prosthetic limbs;
- An effort to understand how radiation therapy causes permanent injury in patients with testicular cancer and develop less damaging treatments;
- The development of high-tech toys to aid children with diseases like cerebral palsy;
- The acquisition of equipment that enables Rhode Island scientists to better study proteins and their role in disease;
- An effort to modify plant fibers to enhance their commercial value and use in products such as biofuels;
- The development of new marine-based drugs to fight a common and deadly hospital infection,;
- A project to develop computer software to identify materials found in fire debris that can be used to improve forensic investigations;
- A partnership to showcase how multiple types of robotic or autonomous underwater vehicles (AUVs) can be integrated for real-time ocean observation and analysis.

The caliber of this year's award recipients reinforces that collaborative research is an important and strategic investment for Rhode Island. Collaboration across institutions creates a powerful platform for maximizing the state's investment in research, strengthens Rhode Island's ability to compete for federal funding, and supports new company creation and job growth.

STAC thanks Governor Donald Carcieri and the Rhode Island General Assembly for their support of this important program. STAC has recommended that funding for the program be continued in 2007.

interactive web site that will provide access to the programs and initiatives of the Research Alliance. This web portal will include a searchable database of core facilities and equipment, researcher profiles, statistical information, and resources for student, postdoctoral and faculty researchers. The website also will facilitate on-line applications to Research Alliance programs and tools for aggregating data required for reporting on Research Alliance and EPSCoR supported research.

Improving Research Capacity at URI

In 2006, STAC called for the creation of a blue ribbon commission to propose specific actions to strengthen the University of Rhode Island's position as a nationally competitive public research university and as a key institution in Rhode Island's efforts to build an innovation economy.

In response to this recommendation, the Rhode Island General Assembly passed and the Governor signed into law legislation creating a commission that will recommend specific actions to strengthen URI's research capacity (S 2988 Senators William Walaska, Daniel DaPonte, James Sheehan and David Bates; H 7979 Representatives John Shanley, Donald Lally, David Caprio, Kenneth Carter and Matthew McHugh).

The creation of the commission recognizes that fulfilling URI's mission as a research-performing institution is vitally important to creating the new knowledge, technologies, processes and products that drive innovation.

STAC is currently configuring the commission. In 2007, the commission will evaluate URI's current research platform and submit to the Governor and each Chamber of the General Assembly a written report of its recommendations.

Support Entrepreneurs and Encourage Investment in Rhode Island Companies Focused on Innovation

In 2006, STAC called for an incentive to attract and retain serial entrepreneurs and encourage investment in Rhode Island companies engaged in innovation-focused activities.

Under the leadership of House Majority Leader Gordon Fox and Senator William Walaska, the General Assembly passed legislation offering a tax incentive that amounts to 50 percent of the investment in a qualified company, for a total of credit of up to $100,000 (S 2995 Senators William Walaska, David Bates, James Sheehan and Daniel DaPonte; H 8000 Representatives Gordon Fox, Peter Kilmartin, Raymond Sullivan, Raymond Church and J. Russell Jackson).

The Innovation Tax Incentive is designed to attract and retain serial entrepreneurs and Rhode Island investors engaged in approved start-up ventures.

Only companies identified as "Innovation Industries" will be eligible for the tax credit. An eligible company must apply to the program prior to claiming the credit, and the state cannot approve more than $2,000,000 in credit applications in any two calendar year period.

The tax credit provision currently has a life of 10 years.

Make Rhode Island the First State with a Border-to-Border Broadband Wireless Network

Imagine a world where the ability to share information in real-time extends border-to-border, leaving no community—rural or urban—without coverage. What would that mean for Rhode Islanders?

For a Rhode Islander having a heart attack, border-to-border broadband wireless could mean the difference between life and death, if, for example, an ambulance could send or receive vital information about a patient's condition while in transit to and from the emergency room.

For our state's students, border-to-border wireless will encourage mobile learning, classrooms without walls, and tools that allow education to happen anywhere, anytime. A statewide network will mean faster, more efficient government services, better public safety, and new opportunities for national security.

Rhode Island Wireless Innovation Networks (RI-WINs), a project of the non-profit Business Innovation Factory, is on the fast track to making Rhode Island the first state in the country with a border-to-border broadband network and pioneering a new model for wireless innovation in business, healthcare, education, government services and public safety.

In 2006, STAC called for support of RI-WINs. By creating an unparalleled platform for wireless innovation, RI-WINs seeks to create a seamless network that covers all of the state's geography and supports economic development in all communities.

In response to STAC's recommendation to support RI-WINs, Governor Carcieri provided $200,000 in funding to expand the RI-WINs pilot into the rural town of Foster.

The RI-WINs pilot currently is operating several applications on a small-scale version of the network in areas in Providence and Newport to test the network's effectiveness, demonstrate that pilot applications can be extended to larger user bases, and troubleshoot issues in advance of a state-wide roll out.

Partners in the RI-WINs pilot include Atrion Networking Corporation, Brown University, Cox Communications, CVS, IBM, Lifespan/Newport Hospital, Ocean State Higher Education Economic Development and Administration Network, the Port Security Communications Network project in Narragansett Bay, RPM Strategy, the State of Rhode Island and Stratum Broadband.

Continued Support for STAC

To make STAC a sustainable activity, the General Assembly provided the council with $100,000 to support its activities and passed enabling legislation that reaffirmed the council's mission and purpose in 2006 (S 2997 Senators William Walaska, Daniel DaPonte, James Sheehan and David Bates; H 8001 Representatives Gordon Fox, Edwin Pacheco, Helio Melo, Edith Ajello and John Shanley).

Building an Innovation Pipeline: Inspiring Kids to Explore Science, Math and Engineering

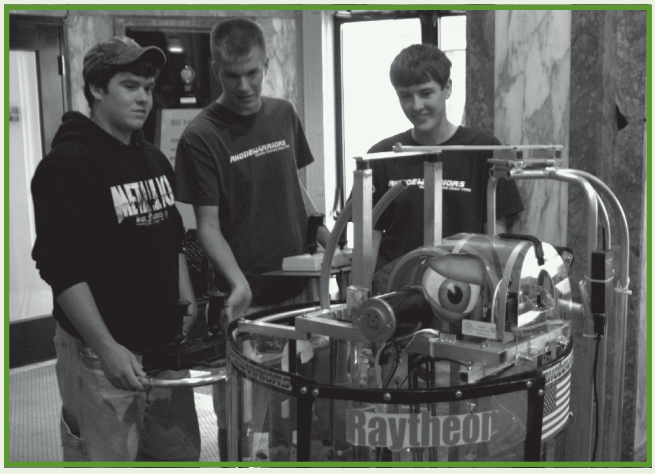
In October 2006, STAC joined the Business Innovation Factory and a coalition of education, innovation, and science and technology leaders to bring Dean Kamen's FIRST Vex™ Challenge to each of Rhode Island's 67 public high schools, charter schools, and career and technical centers. Rhode Island will be the first state in the nation to offer a FIRST program to all public high schools.

Student teams participating in the program will design and construct a working robot capable of completing a specific set of tasks. Teams work as a group to build and test their design, while learning from and interacting with adult mentors. Students must track their progress, successes and challenges throughout the process.

On March 31, 2007, teams will join in a statewide competition where finished robots will go head-to-head to score points. The tournament is designed to be a fun, high-energy event with judges and awards—a structure that brings the same energy and community enthusiasm to learning as traditionally found at school sporting events.

This program is a natural fit with STAC's mission to strengthen the state's basic research platform, encourage entrepreneurship, and prepare Rhode Island's children to participate in a 21st century global economy.

STAC and the Business Innovation Factory are also collaborating with FIRST to conduct a detailed evaluation of the project's implementation. FIRST will use their experience in Rhode Island to test strategies for the program's national expansion, proving again that Rhode Island is an ideal place to develop and test new ideas.



Hands-on learning is a powerful way to improve student performance in science, technology, engineering and math.

Moving Forward: STAC Recommendations for 2007

Growing an innovation economy and creating a more prosperous Rhode Island depends on our ability to continue to make investments year after year, and investments with both short and long-term potential. This strategy will enable us to harvest immediate benefits while sowing the seeds for future growth.

The purpose of STAC's 2007 recommendations is to build upon progress made in 2006 and accelerate Rhode Island's transition toward an innovation economy.

RECOMMENDATION 1:
Continue Support for the Rhode Island Research Alliance and its Direct Investment in Collaborative Research

Rhode Island, bolstered by its ability to serve as a unique place for Innovation@Scale, is especially well positioned to capitalize on research endeavors that leverage public/private partnership and cross-organizational collaboration. STAC believes the best R&D investment for Rhode Island is in efforts that build on current momentum and create stronger connections across the state's public and private research institutions.

"Writing the proposal for STAC's Collaborative Research Award Program was very productive for our company and encouraged us to focus on collaborations within Rhode Island." NABsys president Barrett Bready

STAC's Rhode Island Research Alliance is well positioned to continue this important work. A strong collaborative research alliance will create a powerful platform for maximizing the value of state research investment, strengthening Rhode Island's ability to compete for and attract substantial federal research dollars, and building a platform for the discovery and implementation of new ideas and technologies.

STAC recommends that Rhode Island's leadership support STAC's Research Alliance and its direct investment in collaborative research by renewing the program's $1.5 million in funding.

In its first year, the Rhode Island Research Alliance Collaborative Research Award program provided direct support to 32 scientists from 15 research organizations across Rhode Island. Award recipients included academic and industry scientists pursuing projects in medicine, engineering, chemistry, biology, oceanography and environmental science.

Priority also was given to projects that are collaborative across institutions and well positioned to receive follow-on funding, as well as those with those with significant technology development and commercialization potential.

Awardees include:

- A project to use virtual reality to improve the design of prosthetic limbs;
- An effort to understand how radiation therapy causes permanent injury in patients with testicular cancer and develop less damaging treatments;
- The development of high-tech toys to aid children with diseases like cerebral palsy;
- The acquisition of equipment that enables Rhode Island scientists to better study proteins and their role in disease;
- An effort to modify plant fibers to enhance their commercial value and use in products such as biofuels;
- The development of new marine-based drugs to fight a common and deadly hospital infection;
- A project to develop computer software to identify materials found in fire debris that can be used to improve forensic investigations;
- An academic-industry partnership to showcase how multiple types of robotic or autonomous underwater vehicles (AUVs) can be integrated for real-time ocean observation and analysis.

Benefits of the program are not limited to award recipients. Researchers reported that the process of applying to the program inspired them to investigate new opportunities for in-state collaboration. "The process of writing the proposal for STAC's Collaborative Research Award program was very productive for our company and encouraged us to focus on collaborations within Rhode Island," says NABsys founder and president Barrett Bready. "Through this process we found new top-caliber researchers with whom we could collaborate. I would encourage other company researchers and academics in Rhode Island to complement the national and international collaborations they may already have with collaborations with other Rhode Island-based researchers."

With state support in 2007, STAC will continue its efforts to support research projects that are of significant scientific merit, highly collaborative across institutional boundaries, well positioned to secure additional funding, and have significant technology development and commercialization potential.

RECOMMENDATION 2: Support the statewide build out of the Rhode Island Wireless Innovation Networks (RI-WINs) border-to-border broadband wireless network

Now in the final stages of its piloting phase, the Rhode Island Wireless Innovation Networks (RI-WINs) is preparing for state-wide rollout. RI-WINs will make Rhode Island the first state in the country with a border-to-border broadband wireless network.

RI-WINs is focused on building a platform for wireless innovation that powers new solutions in areas like healthcare, education, public safety and government services. RI-WINs is the only wireless effort, public or private, committed to building a statewide network to promote innovation and support economic development in every Rhode Island community.

STAC recommends that state leadership support the RI-WINs request for a state credit enhancement for $28 million of private sector debt to finance statewide rollout.

Why now? Rhode Island has a unique competitive advantage in becoming the first border-to-border broadband wireless state. Rhode Island's size and geography enable RI-WINs to quickly and cost-effectively build and demonstrate the value of a statewide network. RI-WINs is already operational in Providence and Newport. Most other projects around the country are still in planning stages. However, this advantage will diminish as other projects around the country advance. We must act now to seize this unique opportunity.

RI-WINs has built a compelling, self-sustaining non-profit business model for the build-out and operation of the network. The required $28 million of capital can be sourced with private sector debt backed by a loan guarantee from the state.

RECOMMENDATION 3: Launch the Rhode Island IT and Digital Media Center as an Incubator for New Company Creation and Growth

An exciting opportunity is emerging at the intersection of traditional information technology, digital design and interactive media industries. This new sector is creating innovative new products and services and is poised to create thousands of new high-wage jobs in Rhode Island.

There are many benefits to growing this sector of the Rhode Island economy. The majority of information technology and digital media jobs are knowledge-based and high wage and the sector produces highly skilled workers with a flexible skill base. The information technology and digital media sector has unique characteristics and dynamics that are largely compatible with Rhode Island's existing economic assets. Rhode Island's size and the close connectivity of its business and social networks is a huge asset in creating a successful information technology and digital media sector. Rhode Island's proximity to Boston and New York—world centers for activity in this area—will ensure that Rhode Island information technology and digital media companies can easily connect into the larger market. Additionally, Rhode Island's large student population guarantees a regular inflow of new talent.

Rhode Island also boasts an impressive list of information technology and digital media resources, including the computer science program at Brown University, the Rhode Island School of Design's digital media program, Johnson & Wales' School of Technology, and strong programs at Roger Williams University, Providence College and Salve Regina University.

R.I. Tech Group Shows Promise of Emerging Information Technology & Digital Media Sector

Successful serial entrepreneurs, leading computer science researchers, designers at nationally competitive companies, highly sought after software and hardware engineers. What do they all have in common? They all live and work in Rhode Island. They also are all members of Providence Geeks, a loosely knit group focused on fostering innovation and collaboration in Rhode Island's information technology and digital media sector.

Founded just a year ago by *O'Reilly Media* editor Brian Jepson and Internet strategy consultant and entrepreneur, Jack Templin, Providence Geeks has already built a membership of a few hundred local professionals. The group has forged new connections across this emerging community and now attracts dozens of entrepreneurs and innovators–young and old–to their monthly "Geek Dinners."

Participants network, engage in conversations about topics of local and broader interest, and watch presentations by innovators from local companies and organizations. The group also has an active web presence where members post jobs, blog topics of interest and organize future events.

The emergence of the group is significant for Rhode Island, says Templin, who decided to relocate to Rhode Island after a successful run as an IT and digital media consultant in New York.

"I'm not sure people realize that Rhode Island has such a talented and motivated nexus of IT and digital media entrepreneurs," says Templin. "The energy in this sector is amazing and with the right support from Rhode Island's leadership, could result in a big economic win for the state."

In just a few short months, the Providence Geeks has served as a platform for the state's entrepreneurs to connect and put forth new ideas. But this is just the beginning, says Templin, who feels strongly that the sector is poised for rapid growth.

"All of the pieces are here for Rhode Island to build a very productive sector," he says. "Resources like Brown University, Rhode Island School of Design, the University of Rhode Island, and the quality of life Rhode Island offers is serious incentive for leaders in IT and digital media to settle in Rhode Island."

A small sampling of current information and digital media companies includes Atrion Networking, Public Display, Abaqus, Axon Sleep Labs, Tizra, Working Planet, Upswing, BatchBlue Software, Farsounder, Tellart, Traction Software, Rite-Solutions, Location Inc., and Dynamic Diagrams, among many others.

STAC recommends that state leadership support an annual $600,000 budget request to launch and operate the Rhode Island IT and Digital Media Center.

The primary purpose of the Rhode Island IT and Digital Media Center is to support job growth and new company creation in this exciting sector. The center will provide serial entrepreneurs with subsidized space, growth programs and support, and a community of like-minded entrepreneurs to learn from.

The center will serve as the keystone in building a culture of information technology and digital media entrepreneurship and provide community building and programming that fosters the strategic growth of Rhode Island's information technology and digital media sector.

An annual state investment of $600,000 in the project will enable the Rhode Island Economic Development Corporation to open the Rhode Island IT and Digital Media Center in Providence next to its new offices in the American Locomotive Works development.

This investment will enable the EDC to exercise an option on a 30,000-square-foot center to house five to 10 growth companies at any point in time and offer entrepreneurial support programs and activities to innovators across the state. Operating and program costs will be covered by program and space fees.

By creating a nexus of activity and opportunity for professional growth, the center will help retain the state's IT and digital media entrepreneurs and attract new innovation talent. By attracting new talent, the center will serve as a beacon for out-of-state companies, entrepreneurs, and professionals looking to relocate existing ventures or launch new initiatives. Most importantly, the center will raise Rhode Island's profile as a regional and national center for IT and digital media entrepreneurship and innovation, spur new company creation, and grow more, higher wage jobs for Rhode Islanders.

RECOMMENDATION 4: Create a New Vision for the Workforce Development Requirements of a 21st Century Rhode Island Innovation Economy

Educating and training Rhode Island's citizens to be a 21st century workforce is perhaps the single most important requirement for any innovation economy. It is about helping all Rhode Islanders get the education, skills and experience that will make them competitive for higher wage jobs and allow them to thrive in an economy where jobs and roles constantly change, and where all jobs will require well trained and well educated workers.

We know that Rhode Island workers at every skill and wage level face direct competition with workers from around the globe. We know that many Rhode Island workers are already frustrated by a lack of opportunity for economic growth. We know that learning is a lifetime endeavor and that workers need to be prepared to quickly change and update their skill sets throughout their careers. We also know that businesses and schools must work together to make sure that students develop the skills they need to succeed and that industry has access to a robust supply of qualified workers to drive our increasingly knowledge-based economy.

Most importantly, we know that Rhode Island's workforce development programs must continue to evolve. Programs designed for an old economy—one that no longer exists—will not suffice moving forward.

In 2007, STAC will partner with Rhode Island's workforce development advocates and program providers to create a new vision for what a 21st century innovation economy workforce should look like. STAC will partner with these leaders to put forth a set of recommendations and strategies for creating workforce development programs and opportunities to help all Rhode Islanders succeed. This report will guide future funding recommendations of STAC.

RECOMMENDATION 5: Continued Support for STAC Activities

Creating an innovation economy in Rhode Island will require a deliberate, collaborative and sustained effort from Rhode Island's government, business, academic and community leadership. It will also take time.

Together with Rhode Island's leaders, STAC intends to build upon its recommendations each year. Continued support of STAC will accelerate the state's evolution towards an innovation economy that is nationally and globally competitive and better prepared to meet the needs of its citizens.

STAC recommends that the state renew its $100,000 investment in STAC to support council operations in FY08.

This investment will enable STAC to implement current recommendations and work towards a follow-up set of recommendations that build upon our success.

Conclusion

We believe that the tools to grow and support a vibrant innovation economy are well within Rhode Island's reach. Furthermore, we believe that Rhode Island, drawing strength from its closely connected and talent-rich communities, is at precisely the right place in its history to confidently overcome the challenges we face in making this new vision for Rhode Island a reality.

STAC's 2007 recommendations do not address every issue and factor affecting Rhode Island's ability to prosper in the 21st century. Instead, these recommendations are building blocks for a long-term effort to create an innovation economy that benefits the people of Rhode Island.

STAC urges Rhode Island's leadership to seize this opportunity to take steps today to create a future in which the state's citizens will reap the benefits of a 21st century innovation economy.

Who is STAC?

Co-Chair, **Clyde Briant**, Vice President for Research, Brown University

Co-Chair, **Jeff Seemann**, Dean of the College of the Environment and Life Sciences, University of Rhode Island

Joseph Amaral, President of Rhode Island Hospital

Paul Choquette Jr., Chairman and CEO, Gilbane, Inc.

Kimball Hall, Vice President and General Manager, Rhode Island Operations, Amgen, Inc.

David Hibbitt, former Chairman, ABAQUS, Inc., Providence, RI

Saul Kaplan, Executive Director, Rhode Island Economic Development Corporation

Margaret Leinen, Assistant Director for Geosciences, National Science Foundation

Daniel Martin, Vice President, Maritime Mission Systems, Raytheon

Richard Nadolink, former Chief of Technology, Naval Undersea Warfare Center

Thomas Rockett, Governor for Higher Education and Vice Provost, Emeritus, University of Rhode Island

Thomas Ryan, Chairman, President, and CEO, CVS Corporation

Donald Stanford, President, Stanford Scientific

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